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Multi-bump solutions for the nonlinear Schrödinger-Poisson system. (English)

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Summary: In this paper, we study a kind of nonlinear Schrödinger-Poisson system with a parameter ϵ . For any positive integer m , we prove that there exists $\epsilon(m) > 0$ such that, for $0 < \epsilon < \epsilon(m)$, the equation has an m -bump positive solution under some suitable conditions. As a consequence, the equation has more and more multi-bump positive solutions as $\epsilon \rightarrow 0$.

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MSC:

35Q55 NLS equations (nonlinear Schrödinger equations)

35B09 Positive solutions to PDEs

82D37 Statistical mechanics of semiconductors

Cited in **1** Review
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